

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Application of:

Zatloukal, et al.

Application No.: 09/825,907

Filed: April 4, 2001

For: METHOD AND APPARATUS FOR
PREVENTING OVERLOADING USING
SCALED RECOVERY

Examiner: Alam, Uzma

Art Unit: 2157

Confirmation No.: 3711

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PO Box 1450
Alexandria, VA 22313-1450

APPELLANTS' APPEAL BRIEF

TO THE HONORABLE COMMISSIONER FOR PATENTS:

This brief is in support of a Notice of Appeal to the Board of Patent Appeals and Interferences appealing the decision of the Examiner in the Final Office Action mailed February 27, 2006 ("Final Office Action"), in which the claims of the above-captioned application were again rejected. A Pre-Appeal Brief Request for Review was filed on May 30, 2006. In response to the Request for Review, a Notice of Panel Decision was mailed on October 27, 2006, resetting the time for filing an Appeal Brief to November 27, 2006. Appellants respectfully request consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the present patent application.

I. REAL PARTY IN INTEREST

The real party in interest in the above-identified application is Hall Aluminum LLC, of Los Altos, CA.

II. RELATED APPEALS

The Appellants' undersigned attorney and the assignee identified above are not aware of other appeals or interferences that would directly affect or be directly affected by, or have a bearing on the Board's decision in the subject appeal.

III. STATUS OF THE CLAIMS

Claims 1-3, 5-12, and 14-30 stand rejected under 35 USC 102(e) and 103(a) and are presently appealed. Claims 4 and 13 have been cancelled.

Claims 1-3, 5, 6, 10-12, 14, 15, 20, and 21-25 are rejected under 35 USC 102(e) as being unpatentable over US Patent No. 6,717,915 to Liao (Liao).

Claims 7-9 and 16-18 are rejected under 35 USC 103(a) as being unpatentable over Liao in view of US Patent No. 6,185,184 to Mattaway (Mattaway).

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the Final Office Action.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed toward a method comprising attempting by a client to access a shared resource; detecting by the client that the shared resource is unavailable; determining by the client a first back off interval for the client to delay before reattempting to access the shared resource; successfully accessing the shared resource by the client, upon expiration of the first back off interval; and determining by the client, based on the successful access of the shared resource by the client, a second back off interval for the client to delay before reattempting to access the shared resource after the successful access.

The subject matter of claim 1 may be found in the specification at page 5, line 18 to page 6, line 8 and Figure 1, as well as elsewhere throughout the specification.

In particular, Figure 1 and the associated text provide for clients 202A-202D employing a ramped up approach to accessing shared resource 204 once it becomes available again, after having been unavailable for a period of time.

Independent claim 10 is directed toward an apparatus comprising a storage medium having stored therein a plurality of programming instructions for facilitating the apparatus in attempting to access a shared resource, detecting that the shared resource is unavailable, determining by a client a first back off interval for the client to delay before reattempting access to the shared resource, successfully accessing the shared resource upon expiration of the first back off interval, and determining by the client, based on the successful access of the shared resource by the client, a second back off interval for the client to delay before reattempting access to the shared resource after the successful access; and one or more processors coupled to the storage medium to execute the programming instructions.

The subject matter of claim 10 may be found in the specification at page 5, line 18 to page 6, line 8; page 15, line 9 to page 16, line 8; and Figures 1 and 7, as well as elsewhere throughout the specification.

In particular, Figure 1 and the associated text provide for clients 202A-202D employing a ramped up approach to accessing shared resource 204 once it becomes available again, after having been unavailable for a period of time. Figure 7 and the associated text provide computer system 802 including one or more processors 803, system memory 804, mass storage devices 806, and system bus 812.

Independent claim 20 is directed toward a machine accessible medium having stored therein a plurality of programming instructions for facilitating a client in attempting to access a shared resource, detecting by the client that the shared resource is unavailable, determining by the client a first back off interval for the client to delay before reattempting access to the shared resource, successfully accessing the shared resource by the client upon expiration of the first back off interval, and determining by the client, based on the successful access of the shared resource by the client, a second back off interval for the client to delay before reattempting access to the shared resource after the successful access.

The subject matter of claim 20 may be found in the specification at page 5, line 18 to page 6, line 8; page 15, line 9 to page 16, line 8; and Figures 1 and 7, as well as elsewhere throughout the specification.

In particular, Figure 1 and the associated text provide for clients 202A-202D employing a ramped up approach to accessing shared resource 204 once it becomes available again, after having been unavailable for a period of time. Figure 7 and the associated text provide computer system 802 including one or more processors 803, system memory 804, mass storage devices 806, and system bus 812.

Independent claim 21 is directed toward a method comprising detecting by a client that a shared resource is unavailable; determining by the client a first time period for the client to delay before attempting to access the shared resource; upon expiration of the first time period, determining a new first time period for the client to delay before attempting to access the shared resource if the shared resource remains unavailable, and determining by the client, based on a successful access of the shared resource by the client, a second time period for the client to delay before reattempting to access the shared resource after the successful access of the shared resource by the client.

The subject matter of claim 21 may be found in the specification at page 5, line 18 to page 6, line 8 and Figure 1, as well as elsewhere throughout the specification.

In particular, Figure 1 and the associated text provide for clients 202A-202D employing a ramped up approach to accessing shared resource 204 once it becomes available again, after having been unavailable for a period of time.

Independent claim 22 is directed toward a system comprising a system bus; a processor; an access module coupled to the system bus, and operated by the processor to access a shared resource; and a determination module operated by the processor to determine a first back off interval, based on an unsuccessful attempt to access the shared resource, for the access module to delay before reattempting access to the shared resource, and a second back off interval for the access module to delay before reattempting access to the shared resource after the successful access, the second back off interval being determined based on the successful access of the shared resource by the access module.

The subject matter of claim 22 may be found in the specification at page 5, line 18 to page 6, line 8; page 15, line 9 to page 16, line 8; and Figures 1 and 7, as well as elsewhere throughout the specification.

In particular, Figure 1 and the associated text provide for clients 202A-202D employing a ramped up approach to accessing shared resource 204 once it becomes available again, after having been unavailable for a period of time. Figure 7 and the associated text provide computer system 802 including one or more processors 803, system memory 804, mass storage devices 806, and system bus 812.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-3, 5, 6, 10-12, 14, 15, 20, and 21-25 are unpatentable under 35 USC 102(e) over US Patent No. 6,717,915 to Liao (Liao).

Whether claims 7-9 and 16-18 are unpatentable under 35 USC 103(a) over Liao in view of US Patent No. 6,185,184 to Mattaway (Mattaway).

VII. ARGUMENT

REJECTION OF CLAIMS UNDER 35 USC 102(e)

It is well settled that anticipation under 35 U.S.C. §102 requires the clear and unambiguous disclosure in a single piece of prior art of each and every limitation of a claimed invention. *Electro Med. Sys. S.A. v. Cooper Life Sciences*, 34 F.3d 1048, 1052, 32 USPQ2d 1017, 1019 (Fed. Cir. 1994). Thus to anticipate the present invention, the cited reference must clearly and unambiguously disclose every element of the claim(s). Further, it is also well settled that claim terms are to be accorded the meaning given by the Applicant in the specification. See e.g. *Phillips v AWH Corp.* (CAFC 03-1269, 03-1286).

CLAIMS 1-3, 5, 6, 10-12, 14, 15, 20, and 21-25

Claim 1 provides a method comprising attempting by a client to access a shared resource; detecting by the client that the shared resource is unavailable; determining by

the client a first back off interval for the client to delay before reattempting to access the shared resource; successfully accessing the shared resource by the client, upon expiration of the first back off interval; and determining by the client, based on the successful access of the shared resource by the client, a second back off interval for the client to delay before reattempting to access the shared resource after the successful access.

The Office Action cites Liao for teaching the features of claim 1. However, Liao fails to teach or suggest every element of claim 1.

Liao provides a method for dynamically adjusting the timing parameters in a data network. The timing parameters may include values for implementing a back off interval for retransmission attempts. However, in Liao, such a back off interval is based on an unsuccessful attempt or an unsatisfactory transmission.

Claim 1 recites a first back off interval established based on the determination that the shared resource is unavailable and then, once access to the shared resource is successful, a determination of a second back off interval based on the successful access. The second back off interval thus sets the time before which a successful attempt may be followed by another attempt by the same client to access the same shared resource. Therefore, the first back off interval and the second back off interval in claim 1 differ in that the first back off interval is based on an unsuccessful attempt to access the shared resource and the second back off interval is based on the successful access of the shared resource (see the specification at page 5, line 20 to page 6, line 8). It is this shift that provides for the desired control of the access of the shared resource.

The method of claim 1 thus provides for self-imposed (i.e., client-imposed) restraint and “good citizenship” in which a successful attempt following one or more previously unsuccessful attempts to access a shared resource results in the establishment of a second back off interval to avoid overloading the shared resource as soon as it becomes available and allows for potential access by other client devices that may also have been experiencing an unavailable condition of the shared resource.

Liao, on the other hand, simply adjusts a first back off interval based on unsuccessful or unsatisfactory attempts to transmit data. Liao describes in detail the utilization of various data to determine the optimal back off interval, but at no point

describes establishing a second back off interval based on successful access of a shared resource as recited in claim 1.

The FOA cites Column 4, lines 59-67, Column 6, lines 1-25 and 64-67; Column 7, lines 39-67; and Column 8, lines 1-11, for teaching the determination of a second back off interval. Nowhere in any of the cited passages is the feature taught, namely, (1) determining by the client, (2) based on the successful access of the shared resource by the client, (3) a second back off interval for the client to delay before reattempting to access the shared resource after said successful access.

First, the above features of claim 1 provide for the determination of the second back off interval to be determined by the client. In Liao, the server, alone or in coordination with the mobile device, determines the timing characteristics. Thus, the back off is not a client-imposed restriction, but rather a server driven characteristic based on demands on the server and message timing.

It should be noted that Column 6, lines 1-25, of Liao discusses the wait time after an unsuccessful attempt and thus provides a determination of a first back off interval. However, there is no teaching of a second back off interval that is based on the successful access of the shared resource by the client.

In Liao, after a mobile device has been successful or unsuccessful in accessing a shared resource, a server may analyze the message timing characteristics and, based on unsatisfactory timing characteristics, establish different timing parameters. There is no distinction as to whether there has been success or failure. On the other hand, claim 1 provides a method in which a client establishes a second back off interval based on the fact that the client was (a) successful, and (b) after first being unsuccessful, in accessing a shared resource. Liao fails to provide such a teaching.

Thus, Liao fails to teach all the elements of claim 1; and therefore, claim 1 is patentable over Liao. In particular, Liao fails to at least teach determining by the client based on the successful access of the shared resource by the client (after prior unsuccessful access) a second back off interval for the client to delay before reattempting to access the shared resource after said successful access.

Independent claims 10, 20, 21, and 22 include in substance the same features as discussed above for claim 1. Thus, for at least the above stated reasons, claims 10, 20, 21, and 22 are patentable over Liao.

Claims 2-3, 5-9, 11-12, 14-19, and 23-30 are dependent, directly or indirectly, on claims 1, 10, 20, 21, and 22, incorporating their features respectively, and thus are patentable over Liao for at least the reasons discussed above.

Claim 2

With further respect to claim 2, the Office Action cites Column 6, lines 19-44, of Liao. Liao teaches the establishment of a back off interval based on an unsuccessful attempt. Liao does not teach establishing a second back off interval, and thus, clearly Liao does not teach that the second back off interval is less than the first back off interval as recited in claim 2. Claim 11 contains language similar to that of claim 2 and is patentable for at least the reasons discussed above.

Claim 3

With further respect to claim 3, the Office Action also cites Column 6, lines 19-44, of Liao. In such a description, Liao teaches that successive retransmission attempts should be farther and farther apart (see also Fig. 3, and Column 8, lines 1-5). Claim 3, however, recites that additional back off intervals after each successful attempt should be less in duration than the previous back off interval. Clearly, no such teaching is provided in Liao. Claims 12 and 23-25 contain language similar to that of claim 3 and are patentable for at least the reasons discussed above.

Claim 19

With further respect to claim 19, the Office Action cites Column 7, lines 52-67, and Column 8, lines 1-16, of Liao. Nowhere in Liao is there taught a counter to determine how many unsuccessful access attempts of the shared resource have been made by the client, wherein the counter value is not reset to zero upon the client successfully accessing the shared resource. The cited portion of Liao merely discusses establishing timing parameters, in particular, in which subsequent unsuccessful attempts are followed

by an attempt after a longer back off interval. Liao clearly fails to teach the features of claim 19.

Claim 26

With further respect to claim 26, the Office Action cites Column 6, lines 19-44, of Liao. However, the cited teaching does not teach the second back off interval being based on the number of unsuccessful attempts by the client. First, Liao does not provide a second back off interval. Second, nowhere in Liao is there a teaching of a back off interval being established after a successful attempt, where such an interval is based on the number of unsuccessful attempts by the client. The only teaching in Liao of modifying the transmission frequency indicates that, after an unsuccessful attempt, a retransmission time period may be lengthened. Thus, Liao fails to teach the features of claim 26. Claims 27-30 contain language similar to that of claim 26 and are patentable for at least the same reasons.

REJECTION OF CLAIMS UNDER 35 USC 103(a)

As is well established, the Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. See MPEP 2142. To establish a *prima facie* conclusion of obviousness the factual basis must show (1) a suggestion or motivation to combine the teachings of the references; (2) a reasonable expectation of success; and (3) the combined teachings must teach or suggest all of the claim limitations. *Id*; see also MPEP 706.02(j). The Supreme Court in *Graham v. John Deere Co.* set out the inquiries necessary to develop this factual basis. 383 U.S. 1, 17-18 (1966); see also MPEP 2141. These inquiries include determining the scope and content of the prior art; ascertaining the differences between the prior art and the claims at issue; and resolving the level of ordinary skill in the art.

In particular, ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language, and considering both the invention and the prior art references as a whole. See MPEP 2141.02.

Claims 7-9 and 16-18

Claims 7-9 and 16-18 are rejected under 35 USC 103(a) as being unpatentable over Liao in view of US Patent No. 6,185,184 to Mattaway (Mattaway). Claims 7-9 and 16-18 depend, directly or indirectly, on claim 1 or claim 10, incorporating the features of claims 1 and 10, respectively. Therefore, as claims 1 and 10 are patentable over Liao, so are claims 7-9 and 16-18, by virtue of at least their dependency. Since Mattaway does not remedy the above discussed deficiencies of Liao, claims 7-9 and 16-18 as a whole are patentable over Liao alone or in combination with Mattaway.

VIII. CONCLUSION

Appellant respectfully submits that all the appealed claims in this application are patentable and requests that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

This brief is filed with an authorization to charge Deposit Account No. 500393 for \$500 to cover the appeal brief fee for other than a small entity as specified in 37 C.F.R. § 41.20(b). We do not believe any other fees are needed. However, should it be necessary, please charge Deposit Account No. 500393. In addition, please credit any overages to the same account.

SCHWABE, WILLIAMSON & WYATT, P.C.

Dated: November 27, 2006

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CLAIMS APPENDIX

1. (Previously Presented) A method comprising:
attempting by a client to access a shared resource;
detecting by the client that the shared resource is unavailable;
determining by the client a first back off interval for the client to delay before
reattempting to access the shared resource;
successfully accessing the shared resource by the client, upon expiration of the
first back off interval; and
determining by the client, based on the successful access of the shared resource
by the client, a second back off interval for the client to delay before reattempting to
access the shared resource after said successful access.
2. (Original) The method of claim 1, wherein said second back off interval is less in
duration than said first back off interval.
3. (Previously Presented) The method of claim 2, further comprising:
successively determining additional back off intervals upon each successful
access of the shared resource by the client, without regard to availability of the shared
resource, each of said successive back off intervals being less in duration than each
previous back off interval.
4. (Cancelled).
5. (Original) The method of claim 1, wherein said attempting to access a shared
resource comprises attempting to access a server device coupled to the client.
6. (Original) The method of claim 1, wherein said attempting to access a shared
resource further comprises attempting to access a shared network.
7. (Original) The method of claim 6, wherein said shared network further comprises
an Ethernet network.

8. (Original) The method of claim 6, wherein said shared network further comprises a wireless network.

9. (Original) The method of claim 1, wherein said attempting to access a shared resource further comprises attempting to access a data bus.

10. (Previously Presented) An apparatus comprising:

a storage medium having stored therein a plurality of programming instructions for facilitating the apparatus in attempting to access a shared resource, detecting that the shared resource is unavailable, determining by a client a first back off interval for the client to delay before reattempting access to the shared resource, successfully accessing the shared resource upon expiration of the first back off interval, and determining by the client, based on the successful access of the shared resource by the client, a second back off interval for the client to delay before reattempting access to the shared resource after said successful access; and

one or more processors coupled to the storage medium to execute the programming instructions.

11. (Original) The apparatus of claim 10, wherein said second back off interval is less in duration than said first back off interval.

12. (Previously Presented) The apparatus of claim 11, further comprising:

programming instructions to further facilitate the apparatus in successively determining additional back off intervals without regard to availability of the share resource upon each successful access of the shared resource by the client, each of said successive back off intervals being less in duration than each previous back off interval.

13. (Cancelled).

14. (Original) The apparatus of claim 10, wherein said shared resource comprises a server device coupled to the client.

15. (Original) The apparatus of claim 10, wherein said shared resource comprises a shared network.

16. (Original) The apparatus of claim 15, wherein said shared network comprises an Ethernet network.

17. (Original) The apparatus of claim 15, wherein said shared network comprises a wireless network.

18. (Original) The apparatus of claim 10, wherein said shared resource comprises a data bus.

19. (Original) The apparatus of claim 10, further comprising:

a counter to determine how many unsuccessful access attempts of the shared resource have been made by the client, wherein the counter value is not reset to zero upon the client successfully accessing the shared resource.

20. (Previously Presented) A machine accessible medium having stored therein a plurality of programming instructions for facilitating a client in attempting to access a shared resource, detecting by the client that the shared resource is unavailable, determining by the client a first back off interval for the client to delay before reattempting access to the shared resource, successfully accessing the shared resource by the client upon expiration of the first back off interval, and determining by the client, based on the successful access of the shared resource by the client, a second back off interval for the client to delay before reattempting access to the shared resource after said successful access.

21. (Previously Presented) A method comprising:

detecting by a client that a shared resource is unavailable;
determining by the client a first time period for the client to delay before attempting to access the shared resource;
upon expiration of the first time period, determining a new first time period for the client to delay before attempting to access the shared resource if the shared resource remains unavailable, and determining by the client, based on a successful access of the shared resource by the client, a second time period for the client to delay before reattempting to access the shared resource after the successful access of the shared resource by the client.

22. (Previously Presented) A system comprising:

a system bus;
a processor;
an access module coupled to the system bus, and operated by the processor to access a shared resource; and
a determination module operated by the processor to determine a first back off interval, based on an unsuccessful attempt to access the shared resource, for the access module to delay before reattempting access to the shared resource, and a second back off interval for the access module to delay before reattempting access to the shared resource after said successful access, the second back off interval being determined based on the successful access of the shared resource by the access module.

23. (Previously Presented) The machine accessible medium of claim 20, wherein the programming instructions are adapted to further facilitate the client in successively determining additional back off intervals, upon each successful access of the shared resource by the client, each of said successive back off intervals being less in duration than each previous back off interval.

24. (Previously Presented) The method of claim 21, further comprising successively determining additional back off intervals, upon each successful access of the shared

resource by the client, each of said successive back off intervals being less in duration than each previous back off interval.

25. (Previously Presented) The system of claim 22, wherein the determination module is further adapted to successively determine additional back off intervals for the access module, upon each successful access of the shared resource, each of said successive back off intervals being less in duration than each previous back off interval.

26. (Previously Presented) The method of claim 1, wherein the second back off interval is based on the number of unsuccessful attempts by the client.

27. (Previously Presented) The apparatus of claim 10, wherein the programming instructions facilitate a determination of a second back off interval based on the number of unsuccessful attempts by the client.

28. (Previously Presented) The machine accessible medium of claim 20, wherein the programming instructions are adapted to further facilitate the client in determining the second back off interval based on the number of unsuccessful attempts by the client.

29. (Previously Presented) The method of claim 21, wherein the second time period is based on the number of unsuccessful attempts by the client.

30. (Previously Presented) The system of claim 22, wherein the determination module is further adapted to determine the second back off interval based on the number of unsuccessful attempts by the client.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.